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Threshed tobacco - Quality inspection

打叶烟叶 质量检验

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Threshed tobacco - Quality inspection

1 Scope

This Standard specifies inspection methods and determination for quality of tobacco leaf lamina, stem, debris and detritus (finished production) after threshing and redrying.

This Standard is applicable to flue-cured tobacco and burley tobacco.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 21136, *Threshed tobacco - Determination of stem content*

GB/T 21137, *Leaf tobacco - Determination of strip particle size*

YC/T 31, *Tobacco and tobacco products - Preparation of test sample and determination of water content - Oven method*

YC/T 137.1, *Package of redried strip - Corrugated carton*

YC/T 146, *Leaf tobacco - Threshing and redrying - Technical specification*

YC/T 159, *Tobacco and tobacco products - Determination of water soluble sugars - Continuous flow method*

YC/T 160, *Tobacco and tobacco products - Determination of total alkaloids- Continuous flow method*

YC/T 161, *Tobacco and tobacco products - Determination of total nitrogen- Continuous flow method*

YC/T 162, *Tobacco and tobacco products - Determination of chloride - Continuous flow method*

YC/T 217, *Tobacco and tobacco products - Determination of Potassium - Continuous flow method*

YC/T 236, *Tobacco and tobacco products - Nondestructive detection of strip*

according to 2 boxes (bales). The space between the two sample boxes shall be more than 20. After opening 15cm~20cm thick laminas, diagonally at the quarter point, respectively take 30g~40g of samples. After mixing, put into a sample container. Seal and store. Mark for spare use.

4.1.2 Samples of stem, debris and detritus

In the finished product warehouse, sample according to 2% for products of same lot and same grade. When it is less than 100 boxes (bales), sample according to 2 boxes (bales). The space between the two sample boxes shall be more than 20. Then use a sampler to cut out 10cm~20cm thick tobacco stem, debris and detritus. Extract about 100g of sample in each sample box (bale). Respectively put into a sample container. Seal and store. Mark for spare use.

4.2 Testing of moisture content

4.2.1 Sample crushing

Start the grinder. After preheating by rotating mechanical friction, crush the sample into smoke powder with a size less than 3mm. Dispense the crushed smoke powder and put into a sample container. Immediately seal and mark.

Before crushing the sample, clean each component of the grinder, without any pollution.

4.2.2 Testing of moisture content

In accordance with YC/T 31.

4.3 Determination

If the moisture content of sample meets the technical requirements in 3.1, it shall determine that the moisture content indicator of this sample is conforming; otherwise it shall be nonconforming. If the acceptability of the moisture content indicator of this lot of products is greater than 95%, it shall determine that the moisture content indicator of this lot of products is conforming; otherwise it shall be nonconforming.

5 Testing of lamina structure

5.1 Sample preparation

In the finished product warehouse, sample according to 2% for products of same lot and same grade. When it is less than 100 boxes, sample according to 2 boxes. The space between the two sample boxes shall be more than 20. Lift up the strips with a thickness of about 10cm~20cm of the upper layer tobacco

box in one go. Then extract the whole piece of the strip. Each portion is (3000±300)g. Respectively load into the sample container. Mark for spare use.

5.2 Testing of lamina structure

In accordance with GB/T 21137.

5.3 Determination

If the lamina structure of sample meets technical requirements of 3.1, it shall determine that the lamina structure indicator of this sample is conforming; otherwise it shall be nonconforming. If the acceptability of the lamina structure indicator of this lot of products is greater than 85%, it shall determine that the lamina structure indicator of this lot of products is conforming; otherwise it shall be nonconforming.

6 Testing of debris and detritus structures

6.1 Sample preparation

In the finished product warehouse, sample according to 2% for products of same lot and same grade. When it is less than 100 boxes, sample according to 3 boxes. The space between the two sample boxes shall be more than 20. Then use a sampler to push aside 10cm~20cm thick debris and detritus on the surface. Extract 100g~150g of samples in each sample box (or sack). Respectively put into the sample container. Seal to store. Mark for spare use.

6.2 Instruments

6.2.1 Circular oscillation sorting sieve

When determining debris, use sieves of which clear bore diameters are Φ5mm, Φ4mm, Φ3mm. When determining detritus, use sieves of which clear bore diameters are Φ2mm, Φ1mm, Φ0.71mm.

6.2.2 Electronic scale

The resolution is 0.1g.

6.3 Operating steps

Pour all samples onto the circular oscillation sorting sieve. Vibrate 5min. Collect samples at each grade of sieves. Respectively weigh their masses.

6.4 Calculation

Calculate the content of a specification of debris or detritus according to formula

In the finished product warehouse, sample according to 0.2% for products of same lot and same grade. When it is less than 500 boxes, sample according to 1 box. The space between the two sample boxes shall be more than 200.

8.2 Testing method

In accordance with YC/T 236.

8.3 Determination

If the DVR indicator of sample meets technical requirements in 3.1, it shall determine that the DVR indicator of this sample is conforming; otherwise it shall be nonconforming. If the acceptability of the DVR indicators of this lot of products is greater than 85%, it shall determine that the DVR indicators of this lot of products are conforming; otherwise they shall be nonconforming.

9 Testing of main chemical composition

9.1 Testing items

The chemical composition tested includes:

- Total carbohydrates;
- Nicotine;
- Total nitrogen;
- Chlorine (Cl);
- Potassium (K).

NOTE: Add testing items according to the contract requirements.

9.2 Sample preparation

Excess sample in 4.1.1 of this Standard.

9.3 Testing method

Test total carbohydrates, nicotine, total nitrogen, chlorine and potassium according to the following methods:

- Total carbohydrates: in accordance with YC/T 159;
- Nicotine: in accordance with YC/T 160;
- Total nitrogen: in accordance with YC/T 161;

If the long stem content of sample meets technical requirements in 3.1, it shall determine that the long stem content indicator of this sample is conforming; otherwise it shall be nonconforming. If the acceptability of the long stem content indicators of this lot of products is greater than 85%, it shall determine that the long stem content indicators of this lot of samples is conforming; otherwise they shall be nonconforming.

11 Testing of lamina (detritus) content in stem

11.1 Sample preparation

Extract 1000g~1500g of samples according to 4.1.2.

11.2 Electronic scale

The resolution is 0.1g.

11.3 Operation

Pour stem samples on the sample division plate to fully mix. Use the quarter method to divide into 80g~120g. Tear off the laminas attached to the tobacco stem. Collect all detritus under stem and weigh.

11.4 Calculation

Calculate the lamina (detritus) content in stem according to formula (4).

$$X_2 = \frac{m_3}{m_4} \times 100\% \qquad \cdots\cdots (4)$$

where,

X_2 - Lamina (detritus) content in stem, %;

m_3 - Masses of lamina and detritus attached in stem, in grams (g);

m_4 - Sample mass, in grams (g).

11.5 Determination

If the lamina content in stem of sample meets technical requirements in 3.1, it shall determine that the lamina content indicator in stem of this sample is conforming; otherwise it shall be nonconforming. If the acceptability of the lamina content indicators in stem of this lot of products is greater than 85%, it shall determine that the lamina content indicators in stem of this lot of samples is conforming; otherwise they shall be nonconforming.

- No oil and water stains;

- Lap is tight;

- The carton box is straight and intact;

- Straighten the strapping straps and arrange them evenly;

- The finished strip forming box rises no more than 50mm.

14.2.2 Sack packing shall meet the following requirements:

- See Table 6 for requirements of marks;

- The text is neatly arranged, the handwriting is clear, and no typographical errors can occur;

- The package shall not be damaged and the tobacco stems shall not be exposed;

- No oil and water stains.

14.3 Determination

If any two clauses of 14.2.1 or 14.2.2 are not met, the mark indicator of this box (bale) of samples shall be nonconforming. If the acceptability of the mark indicators of this lot of products is greater than 90%, it shall determine that the mark indicators of this lot of products are conforming; otherwise they shall be nonconforming.

15 Comprehensive determination

If all indicators are conforming, it shall determine that this lot of products are conforming.

If any one of the primary indicators is nonconforming, it shall determine that this lot of products are nonconforming.

If all the primary indicators are conforming, two or more secondary indicators are nonconforming, it shall determine that this lot of products are nonconforming.

If all primary indicators are conforming, one secondary indicator is nonconforming, it shall double sampling for the nonconforming item to retest. If this indicator during retest is conforming, it shall determine that this lot of products are conforming. If this indicator during retest is nonconforming, it shall determine that this lot of products are nonconforming.

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